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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,761	01/29/2004	Clark Bendall	702-102	7060

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Hiscock & Barclay, LLP
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EXAMINER

SMITH, PHILIP ROBERT

ART UNIT	PAPER NUMBER
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3779

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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IPDocket@hblaw.com

Office Action Summary	Application No. 10/768,761	Applicant(s) BENDALL ET AL.	
	Examiner PHILIP SMITH	Art Unit 3779	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 15, 16 and 35-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-14 and 17-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/25/10</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

- [01] The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- [02] The rejection of claim(s) 10,12-14, 17, 19-21,23-26, 28, 30, 33 & 34 as being unpatentable over Murata in view of Hill and Chikama as set forth in the Office action of 5/19/11 are withdrawn in view of the amendments of 7/1/11.
- [03] Claims 10,12-14, 17, 19-21,23-26, 28-30, 33 & 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salvati (5,373,317) in view of Hill (6,929,600) and Murata (2001/0051762) and in further view of Chikama (5,002,041).
- [04] With regard to claim 10: Salvati discloses a modular visual inspection system for viewing the interior of a structure, comprising:
- [04a] a base unit element (“module 17” 4/1) comprising [] a processor element (“contains video processing circuitry”) and a light source (“light source (not shown)” 4/5);
- [04b] a unitary control and display handset element (“combined control handle and viewing screen assembly 14” 4/14+) comprising a screen element for viewing the interior of the structure (“screen 23”) and an articulation control element (“joystick device 20” 4/42);
- [04c] [an] insertion element[] (“insertion tube 11”) for imaging the interior of the structure [] comprising an imaging sensor (“viewing head 12 is disposed at the distal tip of the insertion tube” 3/60-61) and an elongated [] portion,

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[04d] wherein the base unit element is in electro-optical communication with the unitary control and display handset element.

[05] Salvati does not disclose a *plurality* of insertion elements. Moreover, Salvati does not disclose:

[05a] that said plurality of insertion elements include[s] at least two insertion elements have different physical or optical characteristics,

[05b] that each one of said plurality of insertion elements can be directly connected to said unitary control and display handset element, and

[05c] that each one of said plurality of insertion elements can be used without modification of said unitary control and display handset element.

[06] Hill discloses a plurality of insertion elements:

[06a] wherein said plurality of insertion elements include at least two insertion elements have different physical or optical characteristics (“a variety of endotracheal tubes having various lengths” 10/19);

[06b] wherein each one of said plurality of insertion elements can be directly connected (via “universal adaptor 140” 10/18) to [a] display handset element (“module 106” 9/42-50);

[06c] wherein each one of said plurality of insertion elements can be used without modification of said [] display handset element.

[06d] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide an endoscope system in which insertion elements of various lengths may be utilized. Hill teaches with specificity how a plurality of

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differing insertion elements may each be connectable to a display element. The display element disclosed by Hill ("module 106") is analogous to the "

[06e] It is well-known that endoscopes may be used in a variety of procedures for which different insertion elements may be optimal. Moreover, Hill discloses that the plurality of insertion elements can be directly connected to a display element ("module 106," as noted above) which is analogous to the unitary control and display handset element disclosed by Salvati ("combined control handle and viewing screen assembly 14," as noted above). A skilled artisan would be motivated to provide interchangeable insertion elements because it provides a prospective user (i.e., doctor) with greater flexibility in selecting the appropriate endotracheal tube when inspecting a patient's trachea (see BPAI decision at page 10).

[07] As noted above, Salvati discloses a base unit element ("module 17" 4/1) comprising a processor element ("contains video processing circuitry"), and a light source ("light source (not shown)" 4/5). Salvati does not specifically disclose a memory element. Murata discloses a memory element ("memory card 113," [0103]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide the memory element disclosed by Murata in the base unit element of Salvati. A skilled artisan would be motivated to do so in order to enable the long-term storage of image data.

[08] As noted above, Salvati discloses an insertion element having an elongated portion. Salvati does not disclose that the elongated portion is an elongated *braided* portion. Chikama discloses the following in 1/52-59:

A conventional insertion portion (flexible tube structure) for an endoscope ... comprises a holder coil formed by winding a strip-like plate, a braid tube formed around the outer periphery of the holder coil, and an outer sheath of a resin covering the braid tube.

- [08b] At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use convention elements in the construction of Murata's elongated portion. Braids are conventionally used to construct elongated insertion portions in endoscopes because they are strong and flexible.
- [09] With regard to claims 13,14,17: Murata discloses an aperture ("card connector 112," [0103]) to allow insertion of an electronic storage media comprising a PC cards ("113," as noted above).
- [10] With regard to claim 12: Salvati discloses a keyboard ("keyswitches 28" 4/31).
- [11] With regard to claims 19,20: Murata discloses a connectivity element, wherein the at least one connectivity element is a serial port ("serial communication," [0131]).
- [12] With regard to claim 21: the light source is inherently modular.
- [13] With regard to claim 23: Murata discloses a storage reel ("cylindrical drum 4" [0045]) for storing an insertion element.
- [14] With regard to claim 24-25: Murata discloses a weatherproof container element ("a box-like main unit 5," [0045]) sized such that the base unit element fits within the container element.
- [15] With regard to claim 26: Salvati discloses an LCD (4/22) which is inherently capable of showing images in a 16:9 format.
- [16] With regard to claim 27: Salvati discloses that the unitary control and display handset element comprises an anti-glare element ("hood 27" 4/26).
- [17] With regard to claim 28: Salvati discloses a joystick (as noted above).

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- [18] With regard to claim 29: Salvati discloses that the unitary control and display handset element further comprises a switch to freeze an image displayed by said unitary control and display handset element ("freeze-frame keyswitch 28a" 5/13).
- [19] With regard to claim 30: Salvati discloses at least one servo motor ("X and Y servo motors 34 and 35" 4/49).
- [20] With regard to claim 33: The memory element disclosed by Murata is capable of storing data representing images ([0103]).
- [21] With regard to claim 34: Murata discloses that the memory element of the base unit element includes a computer program for generating reports ("reading or writing..." [0103]) based on data obtained by the imaging sensor of each of said plurality of insertion elements.

Additional Claim Rejections- 35 USC § 103

- [22] Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salvati (5,373,317) in view of Hill (6,929,600) and Murata (2001/0051762) and Chikama and in further view of Pearlman (5,347,992).
- [23] Murata does not disclose a fluid reservoir.
- [24] Pearlman discloses the following in 1/11-23:

During endoscopic procedures, the surgeon must frequently irrigate and then suction a region in which he is operating. He is customarily provided with a handpiece that includes two trumpet-type valves, one for the liquid and the other for suction. His task in addition to manipulation of the various optical and surgical appliances associated with an endoscope is to irrigate regions of interest, and to suction out liquids and debris. Anything which can simplify this assortment of tasks is a welcome improvement. Convenience of grasp is a further convenience. If an appliance can only be gripped in one orientation, it is likely that in other alignments it will be inconvenient to manipulate.

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- [25] At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the endoscope disclosed by Murata have an irrigation channel which necessitates a fluid reservoir, as disclosed by Pearlman. A skilled artisan would be motivated to do so because endoscopic procedures conventionally require irrigation of regions of interest; and irrigation requires a fluid reservoir from which to draw irrigation fluid.

Additional Claim Rejections- 35 USC § 103

- [26] Claims 18, 22, 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salvati (5,373,317) in view of Hill (6,929,600) and Murata (2001/0051762) and Chikama and in further view of Saito (6,184,922).
- [27] With regard to claim 18: Murata does not disclose that the processor element of the base-unit element is capable of video compression.
- [28] Saito discloses a "motion-picture data compressing means" (4/42) which compresses endoscope images prior to storage. At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the memory element disclosed by Murata store compressed images as taught by Saito. A skilled artisan would be motivated to do so in order to reduce the required size of the memory element, or to allow a greater amount of data to be stored on a memory element of finite size.
- [29] With regard to claim 22: Murata does not disclose that the modular light source is selected from the group of light sources consisting of: LEDs, arc discharge lamps, lasers, UV Lamps, and IR lamps.
- [30] Saito discloses an arc discharge lamp ("white light source 121 such as a xenon lamp" (14/49). At the time of the invention, it would have been obvious to a person of ordinary skill in the art that in reduction to practice the lamp disclosed by Murata take the particular from

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of an arc discharge lamp. A skilled artisan would be motivated to do so in order to provide strong white light, as xenon lamps are well known to provide.

- [31] With regard to claims 31,32: Murata does not disclose that the image sensor gathers sufficient data to create a selected video signal selected from the group of video signals consisting of: PAL, NTSC, and progressive scan.
- [32] Saito discloses a "light source unit 103" which "agree[s] with the frame frequency of a video signal (29.97 Hz in the NTSC system). At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the displayed video signal disclosed by Murata take the particular form of an NTSC signal. A skilled artisan would be motivated to use conventional elements. In reduction to practice, NTSC is a conventional video signal.

Response to Arguments

- [33] Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

- [34] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
- [35] A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

[36] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip R Smith whose telephone number is (571) 272 6087 and whose email address is philip.smith@uspto.gov. The examiner can normally be reached between 9:00am and 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen, can be reached on (571) 272 4963. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

[37] /Philip R Smith/

[38] Primary Examiner, Art Unit 3779